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Thank you, John for inviting me today. It's an honor to speak before such a distinguished audience, particularly as the topic concerns perhaps the crucial issue of our time, global climate change. I've talked about climate change and energy policy a lot in recent weeks. We are now fully aware, thanks to the dire findings of the Intergovernmental Panel on Climate Change, that our energy consumption is a major cause of global warming. Unless we act now, our world will forever be changed for the worse.

But before we get to the solutions, we need to understand the problem. As you might imagine, this discussion begins and ends with Mother Earth. She's not the paradise she once was, before humans and the industrial age began leaving an indelible carbon footprint. Pollution from automobiles, industrial smoke, and other greenhouse gas creating activities has given our planet a fever. The earth today is more than one full degree warmer on average than it was in 1900, a change now attributed to man. Worse yet, experts say the globe is heating up at triple the pace it was in 1970, and unless we act now we will very soon inhabit a planet that is three to eight degrees warmer. That may not sound like much, but such a change will wreak havoc on our ecological system, accelerating the melting of our polar icecaps, raising sea levels, and bringing significant shifts in our weather patterns.

In my state the situation is already precarious. Nothing will be affected, or affect us more seriously, than water. As someone who grew up in California and has lived there all of my life, I have come to have a very keen understanding of water. Much of California wouldn't exist as it does today without the monumental efforts that constructed our state's water system - one of

the true wonders of the world. California has become a virtual breadbasket for the country - and the world - because our ancestors rerouted vast quantities of water to make the valleys fertile. And some 36 million people now inhabit California because of a reliable supply of water.

But the most important thing about water in California today is this: All of our assumptions, all of our models, all of our planning can be thrown out of the proverbial window, because frankly, they are out of date because of one thing: the looming plague of the 21st Century, global warming.

Think about it: For over 100 years our industrialized society has been based on the use of the most damaging power source we could have devised - carbon based fuels. Yes, they've helped revolutionize and build our state and nation into the world's wealthiest societies. But that success has come at great expense - the health of Mother Earth. Pollution has fouled our ground and our water. Greenhouse gases produced by carbon fuels have turned our atmosphere into a, well, a greenhouse. Temperatures have been driven higher, resulting in serious climatic changes. The main victim in California so far has been our water supply.

Global warming is already diminishing California's primary freshwater reservoir - the Sierra and the Siskiyou mountain snow pack. That's a fact. A July 2006 Department of Water Resources report on the impact of climate change on California indicated that if heat-trapping emissions continue unabated, the Sierra Nevada snow pack could decline by as much as 70% to 90%. In a best case scenario, if global greenhouse gas emissions are significantly curbed, the snow pack decline could be closer to 30%.

Rising temperatures and greenhouse gas levels mean more precipitation will fall as rain instead of snow. More rain could mean we get the same amount of water, but that we get it all at the same time. This will lead to increased threat of flooding, more pressure on our already vulnerable levee systems, and serious issues surrounding our ability to store the water.

Our state's water resources are also at risk from rising sea levels. To date, the world's oceans have served as Earth's primary air conditioning system, absorbing about 80 percent of the heat being added to the climate system from global heating. The warmer water has caused the water to expand, contributing to the sea level rise. Over the past century, sea levels rose 6 to 9 inches. The IPCC report projects sea levels will rise anywhere from 7 inches to 23 inches by 2100.

For California, as sea levels rise, they will threaten not only our coastline, but the quality and reliability of many of the state's fresh water supplies - most notably the Sacramento-San Joaquin Delta. The Sacramento-San Joaquin Delta is a series of water channels, tidal marshlands, and man-made islands that stretch 50 miles north to south from Sacramento to Tracy, and 25 miles east to west from Stockton to Antioch. It may seem like a relatively small patch of California, but its importance to the state's economic success and environmental security is immeasurable.

The Delta is many things to many people. It is a center of agricultural activity and a primary source of California's drinking water. It is a critical habitat for both land and water species - some of which live only in the Delta region. It is a major infrastructural crossroads with Delta aqueducts, canals, and pumping stations shipping water throughout the state, and highways, rail lines, shipping canals, gas and electricity lines, and underground natural gas storage traversing the region. And, due to its proximity to the burgeoning Bay Area and Central Valley populations, there are growing demands on the Delta for recreational use and urbanization.

The Delta was already on an unsustainable path due to subsidence, urbanization, and water use. Now, because of global warming, it is worse. We must redesign, rethink and reconfigure the Delta. All that we have planned, all that we have done for more than 70 years with our Delta water system is no longer viable. It's time for a fundamental change in our long-term strategy for the Delta.

The Public Policy Institute of California's (PPIC) recent 1,300-page report entitled, "Envisioning Futures for the Sacramento-San Joaquin Delta", is a good first step and brings back to the table many ideas that had been taboo. The PPIC report proposes nine potential scenarios for the Delta's future ranging from maintaining a strictly freshwater Delta to creating a fluctuating salt and freshwater Delta; to solutions that halt water exports and completely abandon the Delta. What the PPIC report clearly points out in thoroughly exploring these scenarios is that both the status quo in the Delta and a return to the Delta of 150 years ago are equally untenable solutions. The most prominent path forward may be one that moves the Delta toward a hybrid salt/fresh water future.

Our duty as stewards of this land is clear. First, we must end our dependence upon fossil fuels. This step must be the foundation of a new and sustainable energy policy, one that provides enough energy and does not compromise our national security, as our dependence upon foreign oil currently does. We must invest heavily in discovering alternative, renewable sources of energy, developing the infrastructure to efficiently deliver them to the marketplace, and ultimately bring an end to mankind's relentless assault on the delicate balance of our

ecosystems. We have a moral obligation to future generations to stop global warming. But just as importantly, we have an obligation to provide for our security at the state and national level, a task that we cannot accomplish with our current dependency upon carbon-based fuels.

Because we now draw much of our oil supply from the most risky places on earth - Iraq, Saudi Arabia, Venezuela, and Nigeria - we are at the mercy of the whims of dictators and despots. Even our supplies along the Gulf Coast are precarious, as Hurricane Katrina showed us last year. The decisions made by dictators and the effects of nature determine how much we pay for gasoline, how difficult it is to heat and cool our homes, and how vibrant our economy can be. Considering this predicament, how can our future be secure? How can we truly be a safe country if our economy and social fabric are dependent upon the stability of a place as volatile as the Middle East?

The ongoing war in Iraq has created even more instability in a region that has rarely been stable. Existing and new conflicts will disrupt the flow of oil from those places and could plunge us back into the days of paralyzing fuel rationing. America did not learn its lesson during the early 1970s when the OPEC nations stopped exports of oil to the United States and other western countries. Today, because we have refused to wean ourselves from dependence on fossil fuels, those same nations still have us literally over a barrel. That's why we must create a more rational energy policy. We must change this predicament, and we must do it now. We must demand that our government and our leaders take strong, quick, decisive action. We owe ourselves, and our children, a better world.

Though we are concentrating on California in today's discussion, we cannot ignore the impact of the actions by our global neighbors. The primary geopolitical battle of the next 50 years will be a struggle for energy between the US and China. China's energy consumption per unit of production is some 40 percent above the world average. Furthermore, China gets 70 percent of its energy from highly-inefficient coal burning power plants that lack the anti-pollution stack scrubbing technology currently being implemented in the West.

And it's getting worse. On average, China is building a new dirty coal power plant every seven to ten days. To put that into context: China's greenhouse gas emissions were 42% of US levels in 2001. Just five years later its emissions soared to about 97% of US emission levels. It is likely that China will pass the US as the world's largest greenhouse gas emitter within the next few years, and at current trend levels, Chinese and Indian emission levels could double that of the US and Western Europe by 2050. If we are truly going to address this problem, we must address it globally. The US Energy Department has technical cooperation with China on some issues such as coal, but most technical cooperation with China is barred under Tiananmen

Square sanctions. With over $1 trillion in cash reserves, money is not the issue, but China does lack the training and technology. There is tremendous economic opportunity here for US companies. With proper oversight they could provide China with technologies to help shrink its growing global footprint.

We need to continue to focus resources on mitigating our own carbon footprint, but Congress should also explore carbon offsets for US companies operating in China and India. In this instance, their problem is truly our problem. We must explore all options if we are to find a solution.

With the recent anniversary of the birth of Dr. Martin Luther King Jr., I was reminded of one of his most important, but lesser known speeches. In 1967, during the height of the Vietnam War, he boldly broke with convention and issued a call for the end of American involvement in Vietnam. It wasn't a popular move, even for supporters of his civil rights efforts. He was heavily criticized for speaking out of turn, and his critics were given potent ammunition to brand him a traitor. But this didn't deter Dr. King, whose reasoning for speaking out was simple, yet eloquent: "A time comes when silence is betrayal."

Today, in America, and throughout the world, that time has come again. It is time for world leaders to stop sitting silently and make a strong, lasting commitment to protect our environment, reduce the use of carbon-based fuels, and lead with actions, not just words. It's not an easy task. I have been working on this issue for most of the 32 years I've served the public, beginning with my 1978 authorship of the first tax credit law for conservation, solar and wind energy systems in California. My home state, often serves as a bellwether for the rest of the nation, whether in politics, innovation, or cultural change. Unfortunately, we are also a leader in causing ecological damage to our environment, ranking as the world's ninth largest greenhouse gas emitter (12 tons annually per capita) and ranking second only to the US in consumption of gasoline - 16 billion gallons in 2005 alone.

Just imagine for a moment if we had heeded the words of former President Jimmy Carter, who in the late 1970s issued a wake-up cry to a nation spiraling downward into a full-fledged fossil fuel addiction. President Carter created the Energy Department as a Cabinet-level position, he urged conservation, and he even set tough fuel mileage standards for automakers. Unfortunately, much of what he proposed was undone by lower oil prices and the actions of the Reagan Administration, and we again found ourselves beholden to the whims of those who control the world's oil supplies.

Today despite all of the evidence of a looming climate catastrophe, we are still not putting our money where our mouth is when it comes to global warming. Research and development (R&D) in energy technologies by both government and industry is not growing, but declining. Annual US spending on energy R&D is less than half of what it was 25 years ago. Over the same time period federal spending on military research has grown 260 percent, totaling more than $75 billion a year - more than 20 times the amount spent on energy research. Meanwhile, electricity companies on average invest less than 0.1% of gross revenues on R&D - less than the percentage that the dog food industry invests in R&D on its products. President Bush proposed a 22% increase in Department of Energy research in his most recent State of the Union address, but this is a mere drop in the bucket of what is needed to make a difference. Do we have our national and global security priorities straight? I think not.

To achieve success we must develop a coherent national energy policy that commits to large, long-term investment in clean energy sources and eliminates perverse incentives that foster more consumption and investment in fossil fuel research and development. The emphasis should be on improved battery technology, hydrogen fuel cells, and enhanced solar and wind technology. The 2005 Energy Act was the first major energy legislation in a decade, but $12 billion of its funding went toward research for fossil fuels while a mere $7.7 billion was divided among a wide array of renewable energy sources.

So, I've laid out the gloom and doom scenarios. Now it's time for some answers. What, as individuals, as local and state entities, and as a nation can we do? How can we reverse our nation's addiction to destructive carbon fuels - an addiction that rivals that of a smoker on nicotine? Here's some of what's being done today that might help us break the habit.

In California, as I mentioned, we have long been a leader in the global movement toward environmentally friendly fuel systems, reduced carbon emissions, and the development of markets for renewable energy sources. Our Governor has significantly upped the ante recently by signing legislation and proposing new initiatives to reduce carbon emissions. It begins with AB 32, known as the Global Warming Solutions Act of 2006, authored by the California Speaker of the Assembly, Fabian Nunez. The bill is an ambitious plan that sets a target of 25% reduction of greenhouse gas emissions in the state by 2020. The legislation anticipates the establishment of statewide limits on greenhouse emissions. The State Air Resources Board is directed to adopt regulations by the start of 2008 requiring greenhouse gas emission sources to monitor and report their emissions to the state. By July of this year, the Air Resources Board will identify a list of discrete early actions that can be taken to reduce carbon emissions prior to the implementation of a market-based compliance system. Enforcement of these measures is set to begin by January 2010. By January 2009, California will have a comprehensive scoping plan specifically identifying how it will reduce carbon emissions and targeting sources of emission reductions.

AB 32 is an ambitious plan, unprecedented in scope and potential impacts on the economy in California. Although the process of implementing this legislation is well underway, the bill delegates much of the heavy lifting to the State Air Resources Board and, in so doing, puts off some of the hard political decisions that must be made to realize its goals. Some California legislators fear that putting off those hard questions may overwhelm the resource agency and bog down the reform efforts.

For this reason, Senate Democrats recently introduced a package of bills aimed at hastening the transformation to a sustainable energy policy. The bills acknowledge that the transportation sector contributes 41% of the state's greenhouse gas emissions and seek to aggressively target that sector for reductions. The bills would: 1) prioritize state funded research and development efforts to ensure resources are directed to projects that assess critical impacts of climate change and help bring new, clean technologies to market, 2) mandate changes to transportation planning and urban infill developments that will result in reducing consumption of transportation fuel, 3) more rapidly implement bio-diesel fuel targets, 4) mandate alternative fuel requirements for 50% of new passenger vehicles sold in California by 2020, and 5) codify the Governor's recent Executive Order for a Low-Carbon Fuel Standard which requires that the carbon content from transportation fuels refined and sold in California be reduced by 10% by 2020. This legislation builds upon regulations already in effect since 2004 that will limit greenhouse gas emissions beginning with 2009 model year vehicles and light trucks.

One of the new proposals would authorize state energy officials to order public utilities to buy or build more renewable energy generation sources. It is encouraging to see that as the evidence mounts chronicling the degree of harm to our environment from greenhouse gases and the potential devastation of climate change, that lawmakers are introducing even more bold and immediate agendas. While arguments will continue to roil about whether command and control tactics or market mechanisms are the most effective way to advance our goals, I believe a combination of tactics will emerge. What we must not do is allow ideological debates to distract us from the task. Frankly, we do not have the luxury to engage in such discussions. We must focus with laser precision on pragmatic solutions that get results. Our survival may depend on it.

As I mentioned earlier, even the President has begun to address the issue of global warming. Many have pushed him to act more quickly and aggressively, including big business. On January 19, ten major US companies joined with four leading environmental groups to lay out a set of principles aimed at establishing a firm nationwide limit on greenhouse gas emissions and reducing emissions by 10% to 30% over the next 15 years. So obviously the climate for climate change legislation is warming...and that's a good thing. If the heart of Corporate America and the nation's environmental leaders can find common ground, I think the stage is set for our national political leadership to make significant progress on this pressing issue this year.

Californians are also leading the climate change charge here in Washington D.C. House Speaker Nancy Pelosi is establishing a new special committee aimed at developing and passing climate change legislation, and both California Senators have already proposed aggressive climate change legislation at the start of the 2007 session. Senator Dianne Feinstein has a bill that targets carbon dioxide emissions of energy companies and supports a 'cap and trade' system for meeting goals. Senator Barbara Boxer chairs the Senate Environment and Public Works Committee, which will hear all global warming bills. She is also co-sponsoring a bill that seeks to cut greenhouse gas emission levels to 80% of 1990 levels by 2050.

For every action, there is a consequence. As responsible stewards of this dynamic planet, we have the moral obligation to understand those consequences. That gives us a choice: to continue ignoring the consequences of our actions, or to acknowledge those consequences, change our behavior and make a stand. The answer is obvious. As Dr. King said, "a time comes when silence is betrayal." That time is now. Make your voice heard.

- Lt. Governor Garamendi